acting on the skin itself; 2, by acting on the peripheral nerves. The two kinds of currents act inversely in the first case, though not in the second.

15. In using the two kinds of currents on the peripheral nervous circuits in cases of neuralgia, Engelskjön has never seen any qualitative difference in their therapeutic activity.—*Nordiskt Medicinskt Arkiv*, Bd. xvi., Hft. 4.

Double or Bipolar Uterine Faradization.

In *L'Union Médicale* for October 28 and November 1, 1884, Dr. G. APOSTOLI has an article on this subject, the first portion of his article being mainly concerned with his theories as to the value and applicability of bipolar faradization of the uterus, the following being a summary of the reasons why it is preferable to the unipolar method: (1) The cutaneous pole is suppressed, and the uterus gets the full benefit of the whole electric current. (2) The operation is much more easily performed, requiring no assistant. (3) The pain is lessened by the removal of all electric influence from the cutaneous surface. (4) Generalization is more easy by this method, by reason of the ease with which it is carried out, and hence the execution is more complete. (5) It is by far more efficacious, possibly on account of the increase of the uterine contractility and the use of a stronger current, more intense and more active; is therefore much easier and less harmful.[1]

Clinical experience has fully justified the theoretical claims for this method. Patients upon whom both methods have been used much prefer the bipolar application; and, contrary to what is seen with the unipolar method, the pain is of little moment, and it actually appears to be beneficial in cases of metritis.

The difference between the contraction of smooth and striated muscular fibres is well known; one is active and immediate, the other often slow and sluggish. The contractions of the non-gravid uterus have given rise to much discussion and contradiction. The variability of the contraction from the point of view of time and intensity is indisputable; in one woman several minutes may elapse before it occurs, in another it takes place almost immediately. The same difference is seen as regards force and intensity. This is a clinical fact. Experiments on animals have demonstrated another important fact, that this contraction rarely takes place *en masse* in striated muscular fibres; it takes place progressively, being first localized at the point of application of the electricity, and then radiates more or less rapidly, according to the intensity of the current, through the whole organ. Can we not conclude, from this fact, that in the woman an increase in the number of points of application will increase the action of the electric current, and that by placing both poles in the uterus the maximum action will be obtained from any given current? Clinical experience also justifies this conclusion as regards the human subject; the procedure is less painful and more active.

As regards the pain, it should be noted there is a marked difference in electric sensibility between the body and cervix of the uterus; a fact not hitherto pointed out. The cervix is by far the more sensitive of the two portions; and to obtain the minimum amount of pain with the maximum effect, the electric sound should be carried completely into the cavity of the uterus. In this way the intensity of the current may be twice as great as by the unipolar method. In Tripier's procedure (the unipolar) the medium quantity of faradization is the induction obtained by the sheathing of half the bobbin of his apparatus. A woman will very rarely support the maximum, and here we must understand always the maximum of the bobbin with a large short thread or the *quantity current*, the only one used in the treatment of metritis. The indications for and tolerance of the *fine thread* bobbin are entirely different. In Apostoli's method the inverse is true; the maximum is often obtained, and it is only rarely, especially when the sound is in contact with both the cervix and body of the uterus, that a medium current is sufficient.

---

[1] Cuts of the instrument may be seen in *L'Union Médicale*, No. 153, Oct. 28, 1884.

Should we increase the intensity of the current and force the quantity of the induced current? It may be answered that, if uterine faradization has failed in the cure of metritis, it is because the current was too feeble. To increase the action Apostoli has made several models of his electric sound, of different sizes and with the poles at varying distances apart. With this instrument even pregnancy is not a contraindication to the use of electricity. Very great care must be given to the position of the sound in case of pregnancy. It should *not* be carried *beyond* the internal os, but should be left in the cervix, and held there firmly with the hand, the index finger being in the vagina and against the posterior lip of the cervix. In some cases of very pronounced flexion, when the uterus is in an inflamed state and every movement is painful, it is prudent not to attempt to carry the sound into the uterine cavity. The general and absolute rule is that *no violent movement of any kind may be made;* faradization in these cases is only a sort of therapeutic hysterometre, and will give no good results if violence be used.

The sound should always be introduced without the speculum, and carried along the palmar surface of the index finger, should be carried in slowly, *without effort*, and arrested as soon as it comes in contact with any obstacle. In the treatment of metritis, and in the many indications after parturition, there is a large field of usefulness for the bipolar method.—*L'Union Méd.*, Oct. 28 and Nov. 1, 1884.

Electro-Therapeutics.

Dr. A. Hughes Bennett, in an introduction to a discussion on this subject in the Section of Pharmacology and Therapeutics at the fifty-second Annual Meeting of the British Medical Association, enumerates some of the chief morbid conditions for the treatment of which electricity is believed to be specially suitable. These, for practical purposes, may be considered under three classes: (1) diseases characterized by diminished functional activity; (2) those by increased functional activity; and (3) a large and miscellaneous collection of affections associated with local and general malnutrition. Under the first heading may be placed paralysis, anæsthesia, atrophy, sclerosis, and a variety of other morbid states. The etiology of these conditions is often obscure. The indication for their treatment is to excite and stimulate, to exalt functional activity, to remove anything which inhibits conduction, to overcome obstruction, and to modify abnormal nutrition-changes. The casual as well as the symptomatic manifestations must be brought under the influence of the current; and, in paralysis or anæsthesia, not only must the secondary local effects be treated, but the primary central lesions which caused them must be beneficially modified. Should any obstruction to natural impulses exist at any portion of the nerve-tract, this may often be successfully overcome by an electric stimulus, which thus artificially paves the way for subsequent normal impressions, and the consequent repetition of which ultimately ends in the transmissions of the healthy functions. Here, also, attempts are made to stimulate depressed functions into normal activity; and, by utilizing the catalytic properties of the current, in modifying nutrition, and influencing the trophic elements of the tissues, to facilitate the absorption of morbid products, and to promote the return of healthy structure. On these principles, there is obviously